



The Laboratory for Student Success

Quality Teachers for English Language Learners

prepared for
The Laboratory for Student Success

by
Kip Téllez and Hersh C. Waxman

A Review of the Research



The Mid-Atlantic Regional Educational Laboratory at
Temple University Center for Research in Human Development and Education

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A Review of the Research

Quality Teachers for English Language Learners

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Current Conditions

Recent political imperatives have pushed the issue of teacher quality to the top of the reform agenda in U.S. education (Cochran-Smith & Fries, 2001; Darling-Hammond & Youngs, 2002; Téllez & Waxman, 2006). While the recent focus on teacher quality may give us the illusion that it is a new topic, questions about the preparation, recruitment, and retention of good teachers has been an ongoing concern (Urban, 1990) and remains an international issue (Hopkins & Stern, 1996).

However, the interest in teacher quality has yet to yield research or policy studies specifically examining the quality of teacher preparation for English-language learners (ELLs). Indeed, up until the 1980s, the preparation of teachers for ELLs was largely ignored in the teacher professional-development literature. Even the advent of bilingual education in the late 1960s failed to promote much specific training in language instruction. Bilingual teachers were simply told to teach their students in Spanish with little regard for the inevitable transition to English. Many programs devoted their curriculum to improving the Spanish skills of their future bilingual teachers. Similarly, English-language development (ELD) teachers were simply told to speak as much English as possible to their ELL students under the impression that “they’ll catch on.” This lack of attention to specific pedagogy for ELLs has curtailed their academic growth (Waxman & Padrón, 2002).

The issue of teacher quality for ELLs was quickly underscored, however, when García (1990) illustrated the pitiful state of teacher quality for ELLs. Citing the results taken from several national reports, he concluded, “Such data continue to suggest that linguistic minority education programs are staffed by professionals

not directly trained for such programs who might be acquiring their expertise on the job.” More recently, teacher-education researchers have discovered that a great many ELD teachers, unprepared for conditions working with a culturally and linguistically diverse student population, fail to acquire much expertise “on the job” (Britzman, 1991). Instead, they grope for quick-fix strategies, often becoming stressed at their lack of success. Such teachers can “burn out” quickly, leaving the profession or remaining in teaching but without the motivation to provide a quality education or obtain the requisite skills.

García’s report (1990) and other factors (e.g., the sheer growth in the ELL population) motivated teacher educators and policymakers to initiate improvement in the quality of ELD instruction, and the decade of the 1990s saw a host of new policies and programs for the preparation of ELD teachers. Many universities began specialized preparation for ELL students, although some needed state legislation to initiate such improvements. Even in states with relatively few ELL students (e.g., Iowa), educators saw the need to provide special language-teaching preparation. During the 1990s, such states were exporting the vast majority of their teachers to “growth” states (e.g., Texas, Arizona), where many of the new teaching positions were in bilingual or ELD classrooms. Consequently, teacher-education programs with almost no local need for language educators developed a strong ELL focus.

In addition, school districts nationwide now routinely provide inservice professional development for ELD teachers. Districts may develop their own inservice programs or they may rely upon the expertise of the many organizations providing such information. ELD instruction has become a growing professional-development opportunity in the last 10–15 years.

However, even with the additional ELD coursework and ELL field experiences—which are required of newly licensed teachers—as well as the many opportunities for inservice teachers to learn more about language teaching, Lewis, Parsad, Carey, Bartfai, Farris, and Smerdon (1999) found that most teachers who taught ELLs and other culturally diverse students did not feel that they were prepared enough to meet their students’ needs. Other reports corroborate this finding, suggesting that the current preparation for all ELD teachers is inadequate (Alexander, Heavyside, & Farris, 1999). A recent study (Rumberger & Gándara,

2005) points out that ELLs are exposed to more uncertified and beginning teachers, who lack essential pedagogical knowledge and skills, than are students who are native English speakers. This study also found that ELD teachers in California still receive scant professional development in both content-based and English instruction. Furthermore, data documenting ELL academic underperformance by the National Center for Education Statistics (1998) provide additional evidence that ELL teacher quality is in need of a major reappraisal. In a large scale study of over 5,000 teachers in California, Gándara, Maxwell-Jolly, and Driscoll (2005) found that teachers had few professional development opportunities targeted to help them work effectively with ELLs. The study also revealed that many teachers faced barriers communicating with their students and the students' parents and that teachers lacked appropriate materials and resources to meet their students' needs.

Who or what is to blame for the inadequate quality of ELL teachers? The general shortcomings in teacher education (both preservice and inservice) with regard to students outside the “mainstream” could be a possibility. For instance, ELL teacher quality may be no better or worse than the quality of teachers who work with gifted children or those who have special instructional needs. Teachers have always been troubled by their lack of knowledge in dealing with students who represent special-needs groups (McLesky & Waldron, 2002).

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The continued low achievement among ELLs and the prospect for continued ELL population growth in U.S. schools, as well as the data reporting the lack of preparation for ELD teachers, suggests to us the immediate need for an appraisal of ELL teacher quality. Research, policy constraints, and opportunities that have contributed to the general lack of quality among ELD teachers are examined here. We begin by framing teacher quality around several important policy “levers.” We follow this discussion by examining the structural factors central to teacher quality. As part of this effort, we briefly explore the role teacher education has played in the development of ELD teachers, moving next to recently developed standards for ELD teachers, and on to legislative and policy issues in licensing ELL teachers.

Finally, we move from the structural to the pedagogical, discussing the knowledge base in ELD instruction, considering (and speculating) on the specific kinds of knowledge ELD teachers need to provide high-quality instruction.

General Studies of Teacher Quality

In spite of the recent attention, teacher quality remains a construct with few agreed-upon characteristics. We propose that the four areas of opportunity and policy levers for teacher quality—set forth by Reinhardt (2001)—succinctly reflect the issues and policies concerning ELL teacher quality (see Table 1). In this article, we emphasize the Recruitment/Selection and Inservice section in Table 1 because, while we recognize the importance of initial teacher preparation, the development and growth of practicing teachers is where teacher quality is most likely to affect student performance.

Table 1: *Areas of Opportunity and Policy Levers to Affect Teacher Quality*

Areas of Opportunity to Influence Teacher Quality	Policy Levers to Affect Teacher Quality
Preservice	<ul style="list-style-type: none"> • Scholarships, loans, and loan forgiveness as incentives to enter teaching • Licensure/certification requirements • Accreditation of teacher-preparation programs • Models of exemplary practices and programs
Recruitment and Selection	<ul style="list-style-type: none"> • Effective communication with applicants • Alternative approaches to entering teaching • Teaching mobility policies
Inservice	<ul style="list-style-type: none"> • Professional learning • Induction programs to help new teachers • Compensation to encourage gaining new skills • Recertification requirements to support high-quality professional learning
Retention	<ul style="list-style-type: none"> • Working conditions • Compensation

Note: The four areas of opportunity to influence teacher policy are derived from R. Reinhardt (2001), *Toward a comprehensive approach to teacher quality*. Aurora, CO: McREL.

Preservice Teacher Education

Recent research findings (Goldhaber & Brewer, 2000) and policy reports (Abell Foundation, 2001) have called into question the value of preservice teacher education. Although none of these new attacks on preservice teacher education have specifically named ELL teacher preparation as a weakness, teacher educators, themselves, have been some of the most vocal critics of ELD teacher preparation. Tedick and Walker (1994) maintain that second-language teacher education has failed in the following five areas. First, they argue, teacher training has undervalued the interdependence between native and second languages and cultures (i.e., prospective teachers are told that acquiring English subsumes all other language skills and should proceed more rapidly). Furthermore, teachers have not understood the importance of validating, developing, and understanding home culture and language. Second, they argue that second-language teacher education is too often fragmented. In most programs, bilingual, ELD, and foreign language teachers are separated for courses in language-teaching principles and methods. This leads to an unhealthy dichotomy, where foreign-language teaching is considered high-status teaching while bilingual and ELD teachers and their students are thought of as compensatory. Third, Tedick and Walker maintain that many teacher educators consider language as a content area, much like mathematics or science. This misunderstanding suggests that teachers simply must know the language to teach it. In addition, when language becomes an object, we believe that second-language teaching is teaching about language rather than teaching with language. Teacher-education courses that emphasize only the form-based features of a language (e.g., phonology, syntax) fail to help teachers develop a communicative understanding (e.g., pragmatics, socio-cultural competency) of language. When language teaching is nothing more than the didactic presentation of form, facts, and rules, ELLs have little chance of gaining the fluency and thereby the accuracy needed to participate fully in schooling. Fourth, second-language education has become paralyzed by its focus on effective teaching methods. Many of the textbooks used in second-language teacher education only provide a list of strategies. The contexts in which such strategies may be effective is not addressed, and beginning teachers are left with teaching tools but no knowledge of when or where to use them. Finally, Tedick and Walker maintain that the disconnect between language and culture has left

language teachers without any consideration of home or target culture or the ways in which these two may relate.

Several general critiques of language-teacher education have emerged in recent years. For instance, Milk, Mercado, and Sapiens (1992) suggest that future ELD teachers have knowledge of the kinds of programs and other ELL instructional

services; an understanding of the principles of second-language acquisition; how to use parents as an instructional resource in the classroom; and the ability to deliver an instructional program that provides many opportunities for listening, speaking, reading, and writing, preferably integrated into an instructional theme.

While preservice teacher education is unlikely to disappear entirely, educators and policymakers are considering alternatives to traditional-style programs. Many such reformers are focusing their attention on inservice teacher development.

Ada (1986) endorses new ELD/bilingual teachers' sharp criticism of their teacher-education programs. In particular, she is sympathetic to the view that teacher educators failed to practice what they taught, expressed forcefully by one of the teachers in her study: "They preached to us to teach creatively, but we were never allowed any creativity. They encouraged us to be good communicators, but the classes they taught were deadly."

From Ada's perspective, preservice ELD and bilingual teachers are not provided with the proper knowledge and experiences to best serve ELL students, and teacher educators are to blame. Ada concludes by suggesting that bilingual teachers have been marginalized like the students they serve and advocates an approach to teacher education that validates students' life experiences (linguistic and cultural). From this validation, Ada argues, will emerge a solidarity that bilingual teachers can use to transform their position from passivity to active leadership. In spite of her admonishments, Ada is not entirely clear on how to achieve such solidarity.

Preservice teacher preparation is undergoing a major reappraisal (Darling-Hammond & Bransford, 2005; Darling-Hammond & Bartz-Snowden, 2005; Tom, 1997). Researchers and policy analysts from both inside and outside the profession are calling into question the field's ability to enhance the quality of ELD teachers. And while preservice teacher education is unlikely to disappear entirely, educators and policymakers are considering alternatives to traditional-style programs.

Many such reformers, armed with the belief that teachers learn best when they are teaching their own classes, are focusing their attention on inservice teacher development, the topic of the next section.

Inservice Teacher Education

Reviews of general inservice teacher preparation programs are somewhat common. For instance, Darling-Hammond and McLaughlin (1995) describe the features of successful inservice professional development. Their research suggests that the “one-shot” inservice programs are not likely to alter teaching practice. Instead, they argue that teacher-knowledge growth should build on what we know about human learning. Therefore, the most effective professional-growth opportunities are those whose topics emerge from teacher interests, require a long-term commitment from all parties, and engage in clear measurement and evaluation of goals and teaching targets.

In the absence of any studies directly attending to the quality of ELD teachers, we will share three model inservice programs designed to enhance ELD teacher quality. These examples are taken from a 1995 report, commissioned by the Office of Bilingual Education and Language Minority Affairs (now known as the Office of English Language Acquisition) (Leighton, Hightower, & Wrigley, 1995), which offers the results of a review of inservice programs designed to enhance the quality of bilingual teachers. Of course, the development of bilingual teachers differs somewhat from the growth of ELD teachers; but this document, especially in the programs we note here, deals with the issues pertinent to ELD.

The first program is located in Fresno, California, a community widely known for a large population of Southeast-Asian students (as well as Latino students). Faced with increasing growth in its ELL population, Balderas Elementary School joined with the faculty of a local university, whose numbers included a professor who understood the languages and cultures of Asian students. Balderas teachers were offered the opportunity to take masters classes at the university, paid for with categorical funds and designed to support graduate-level coursework related to school programs. The goal of the coursework, which was tailored to Balderas and its students, included designing a custom language program for students

and the general features of learning how to teach ELD. Specifically, the teachers investigated hands-on science instruction, emphasizing growth in teachers' content knowledge and skill in using content-based ELD methods. For instance, two kindergarten teachers reorganized their classes into native-language groups during story hour. Bilingual teachers and aides told stories in each group's primary language, a strategy that helps students build on prior experiences and link those to early literacy practices.

The second inservice program is known as the Funds of Knowledge for Teaching (FKT). This program is based on the work of Luis Moll and others who suggest that the culture of students pervades all educational activities. The FKT project assists teachers in creating academic materials, strategies, and activities that substantially build on what students know and can do outside of school. FKT creates opportunities for teachers to (a) learn the methods of ethnography and use their knowledge in home visits, (b) analyze the content and methods of typical school lessons, (c) engage in collaborative study, and (d) create instructional units that use the content and methods of home learning to inform the content and methods of school learning. Participating teachers used the contexts, skills, and information familiar to students in the development of their lessons.

The third inservice program is located in Starlight Elementary School in Watsonville, California, which serves a largely Latino population whose families often depend on agricultural work. As a demonstration site for the Center for Research on Excellence and Diversity in Education, the school has the opportunity to engage in many professional-growth activities. In particular, the upper-grade teachers have developed several comprehensive literacy/social-studies units designed to improve student reading and writing skills while utilizing student knowledge in a critical literacy framework. Partly as a result of the units, the school has received several awards for its student achievement and teacher learning. The school also serves as a professional-development school for preservice teachers who attend the University of California, Santa Cruz.

Professional growth for ELD teachers remains troubled by the general challenges of inservice teacher development (e.g., one-shot inservices, few connections to specific teaching contexts). The examples we have shared here, albeit

successful, require both additional time and resources that many schools cannot afford. And we suspect that the vast majority of professional-growth efforts are not as well received (Penner, 1999). There are other examples of effective professional development programs for teachers of Hispanic students that could similarly be modeled and adapted in other settings. García and Guerra (2004), for example, describe a successful teacher professional development program that focused on addressing issues of diversity and equity for predominantly Caucasian teachers who worked with Hispanic students. Their program emphasized various aspects of culturally-relevant instruction, intercultural communication, and cultural sensitivity that helped teachers overcome some of their negative biases and stereotypes towards Hispanic students.

In summary, the professional development of ELD teachers must be addressed in order to improve ELL education (Jimenez & Barrera, 2000; Téllez & Waxman, 2006). As Jackson and Davis (2000) put it, “Teachers cannot come to expect more of their students until they come to expect more of their own capacity to teach them.” The findings expressed in this article suggest that much more emphasis must be placed on providing high-quality professional learning experiences and opportunities for ELL teachers. While the professional-development programs described here create a collaborative culture for the teachers, they are rarely enough to help teachers overcome some of the state, district, and school policies that limit their capacity for helping ELLs in their classrooms. For instance, high-stakes testing creates a sense of powerlessness and alienation among teachers that results in a weak sense of teacher self-efficacy and self-belief. When teachers have a strong sense of their own efficacy, they can make a real difference in the lives of their students (Ashton & Webb, 1986). On the other hand, when teachers lack hope, optimism, and self-belief, schools and classrooms will “become barren wastelands of boredom and routine” (Hargreaves & Fullan, 1998).

Schools need to provide continuous, quality, professional learning experiences for all teachers. These learning experiences need to help teachers become optimistic, hopeful, and empowered so that they believe that they can help improve the education of all children.

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become optimistic, hopeful, and empowered so that they believe that they can help improve the education of all children. While the aforementioned inservice projects provide meaningful learning experiences for the teachers involved, other projects need to be developed, implemented, and tested that focus on “re-culturing” or changing the entire school climate so that teachers and administrators create more collaborative, supportive work cultures that enable them to be “out there” in ways that make a difference for all students (Hargreaves & Fullan, 1998).

Standards for ELD Teachers

Having reviewed the shortcomings of teacher education, it might be tempting to blame those who plan and manage teacher development for low ELD teacher quality. However, even if we agree that those educators responsible for ELD teacher professional growth have not provided the proper training opportunities, we might justifiably ask, “What specific knowledge should ELD teachers possess?” Even if teacher educators provide ample time and resources for ELD teachers to learn the content they need to provide quality instruction, would it be enough? In other words, is the knowledge base adequate to provide ELD teachers with the direction they need to conduct their work? If the lack of quality among ELD teachers is owing to a failing of the knowledge base, then perhaps the researchers and policymakers who work in this area have been remiss.

The knowledge base promoted by professional organizations concerned with ELD instruction must undergo considerable scrutiny. We know that each subject-oriented professional association has, at some point, been interested in the teacher knowledge base. For instance, the International Reading Association (IRA) has developed “standards” (or recommendations) for the reading-teacher knowledge base. IRA standards include a focus on valuing and understanding linguistic diversity as it relates to the teaching of reading (International Reading Association, 1998).

The two professional organizations whose focus is squarely placed on the education of ELL students in the U.S. are the National Association of Bilingual Education (NABE) and the Teachers of English to Speakers of Other Languages (TESOL). Between them, their U.S. membership totals over 30,000. And while

they are both primarily concerned with curriculum and instruction for practicing, they are also devoted to the education of teachers (each has a special interest group for teacher education). Both have developed recommendations for the preparation of teachers for their respective disciplines. The guidelines from NABE (1994) suggest adherence to the general standards recommended by other teacher-education organizations (e.g., National Council for Accreditation of Teacher Education [NCATE]) such as the requirement for institutional commitment to the teacher-education program and extended supervised field experiences, in addition to standards specific to bilingual education. These specific standards include an understanding of the philosophy, theory, and history of bilingual education in the U.S., as well as processes of second-language acquisition, the integration of language and content instruction, and native-language acquisition processes.

TESOL, in conjunction with NCATE, recently developed standards for ELD teacher education (TESOL, 2003). Like those articulated by NABE, the TESOL standards are designed for initial teacher preparation, but we can look to them as guides for quality ELD teaching in the early career and beyond. The TESOL/-NCATE program standards divide ELD instruction into five domains.

- **Language:** Teachers must understand language as a system, knowing components of language such as phonology, syntax, semantics, pragmatics, and writing conventions. They should also understand native- and second-language acquisition.
- **Culture:** Teachers must understand the role that culture has in language development and academic achievement. They must also understand the nature of cultural groups and how students' cultural identifications affect language learning.
- **Planning, Implementing, and Managing Instruction:** Teachers must understand how to teach to standards in ELD, as well as use resources effectively in both ELD and content instruction.
- **Assessment:** Teachers must understand how systematic biases in assessment may affect ELLs. They must also know the proper methods and techniques for assessing student-language growth.

- Professionalism: Teachers must know the research and history in the field of ELD. They must also act as advocates for both their students and field, working in cooperation with colleagues when appropriate.

An NCATE review of a teacher-education program will yield a rating on each of the above domains. However, we cannot be sure how current programs are measuring up. At present, we are not aware of any programs that have been reviewed using the new ELD standards. We should note that a recent review of the NCATE/TESOL effort suggested that the standards “fail because of their prescriptivism, instrumentalism, and impracticality” (Newman & Hanauer, 2005, p. 762).

In addition to both the NABE and TESOL standards, the National Board for Professional Teaching Standards (NBPTS) has developed ELD standards for the purpose of awarding board recognition for exemplary practicing teachers. The NBPTS standards for teachers of English as a new language represent a set of ideas similar to those articulated by the other professional organizations, but also include expert knowledge in teaching of ELLs. Briefly described, the four NBPTS standards specific to ELD require teachers to have a deep knowledge of (a) knowledge of students—how development, language, and culture affect students’ knowledge, skills, interests, aspirations, and values; (b) knowledge of language and language development—expert knowledge of the target language, as well as processes by which students learn their native and second languages; (c) knowledge of culture and diversity—how to use culture to structure for successful academic experiences; and (d) knowledge of subject matter—a comprehensive command of subject knowledge, as well as how to facilitate student learning.

The measurement of the NBPTS criteria is far more troublesome, especially for the NBPTS assessors, who must distinguish between merely good ELD teachers and those who are truly exemplary. Nevertheless, the educators vested in ELD should pay careful attention to the NBPTS process and the relationship between teachers who choose board certification and the achievement of their students.

Interestingly, the major teacher-education organizations have been largely absent from the discussion on the preparation of quality ELL teachers. The two primary teacher-education organizations in the United States—the Association of Teacher Educators (ATE) and the American Association for Colleges of Teacher

Education (AACTE)—have devoted great attention to preparing teachers for culturally diverse students (Quisenberry & McIntyre, 1999) while paying little attention to teachers who will face language diversity. Indeed, AACTE has commissioned no less than six reports or books (e.g., Smith, 1998) on the preparation of teachers for cultural diversity, but not one focuses on language diversity. AACTE only recently developed a resolution on the preparation of teachers for language minority students, encouraging the development of “programs that recruit, train, and support teachers of all subjects and grade levels who can meet the needs of second-language learners” (American Association for Colleges of Teacher Education, 2003).

It is not clear why ATE and AACTE have neglected the preparation and professional growth of ELD teachers. One reason may be that the history of these organizations reveals a long and lasting interest in the education of African-American students and the development of teachers who view multicultural education as central to their work. Such a focus is, of course, warranted, given their respective missions, but we believe that both must soon devote more interest in the preparation and growth of ELD teachers.

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We cannot be certain that the knowledge bases developed by various professional organizations are sufficient to produce high-quality teachers. However, it seems to us that these organizations have developed thoughtful and warranted goals for ELD teachers. Our concern regarding the knowledge base for developing high-quality ELD teachers is not the standards themselves, but the failure of the various professional groups to prioritize among their standards. We believe that teacher preparation at the preservice or inservice levels could address only a fraction of the promoted standards given the time and resources available for teacher development. Educators have known for many years that the challenge in developing instructional goals is not what knowledge to include, but what knowledge can be thoughtfully excluded. Comprehensiveness in developing standards is a worthy goal, but prioritizing goals and considering the instructional space devoted to them is equally important.

Legislative and Policy Issues

The shortcomings of language-teacher quality may be owing to teacher educators and the failure of adequate standards or knowledge base, but the revealing data on legislated ELD teacher requirements and other initiatives sheds light on the neglect and misdirection policymakers have shown towards the preparation of ELD teachers.

In a recent report, Menken and Antunez (2001) assess the preparation and certification of ELL teachers. Before surveying those universities and colleges that prepare bilingual teachers (the focus of their study), Menken and Antunez developed a matrix (or knowledge set) based on existing professional standards and interviews with experts. Their matrix, divided into the following three broad areas of knowledge, served as the categories for their survey:

- Knowledge of Pedagogy (e.g., native-language literacy methods, assessments of English literacy, practicums in bilingual-education settings)
- Knowledge of Linguistics (e.g., native-language acquisition, structure/grammar of English, contrastive analyses)
- Knowledge of Cultural and Linguistic Diversity (e.g., history of bilingual education, cross-cultural studies, parent involvement)

Based on 417 surveys (out of 1,075 sent) returned by schools, colleges, and departments of education in the United States, only 93 of the institutions even offer the bilingual-education credential and only 103 offer an ELD program for teachers. Only six states consistently require courses in the areas of expertise; almost all others require only a “competency” with only vague guidelines for assessing that competency. Only Maine and Connecticut, states whose total limited-English proficiency (LEP) population amounts to a fractional percent of the nationwide total, consistently require courses for the ELD certificate. An earlier report by McKnight and Antunez (1999) confirms states’ loose or nonexistent requirements for ELD and bilingual teachers. Of the 50 states, 37 offer English as a second language (ESL [ELD]) teacher certification/endorsement, yet only 23 of these have a legal mandate to require ESL certification, leaving room for emergency teaching permits. As for bilingual/dual-language certification/endorsement, only 19 states

require such endorsement (only 17 of those have a legal mandate to require such certification).

It is also important to note that, even in the states requiring certification or endorsement, many allow emergency or “exam-only” credentials to teach both ELD and bilingual classrooms. In Texas, for instance, any teacher with a standard elementary certificate can request that the bilingual or ESL endorsement be added by passing a single paper-and-pencil examination (and an oral test of Spanish in the case of the bilingual endorsement) and teaching in a classroom with at least one ELL student for 1 year. No field supervision is required for the exam-only option. Such a system promotes a climate where teachers quickly receive their initial certificate to begin their careers and then simply take tests to add endorsements. The licensing shortcomings found in the states must certainly shoulder some of the responsibility for poor ELL teacher quality.

Other possible causes of low teacher quality are the failure to retain expert ELD teachers and inadequate compensation for working with ELLs: Are schools and school systems doing enough to retain the strong ELD teachers they employ, or do many ELD teachers leave the profession just as they are becoming highly capable language teachers? Or perhaps the challenges of teaching ELLs merit higher pay for teachers. It may also be the case that ELD teachers need resources (e.g., books, technology, instructional assistance) beyond what the non-ELD teacher receives. When the extra resources needed are scarce, teachers may choose to work with native-English-speaking students rather than struggle with under-resourced ELD classes.

The cause of low ELL teacher quality is likely a complicated interaction of all the above points. Teacher educators have not provided a strong enough focus on language instruction while state legislators and policymakers have generally failed to require the specialized knowledge needed for quality ELD teaching. The professional associations devoted to language teaching have only recently developed standards for teaching ELD, while the major teacher-education professional organizations have given scant attention to the preparation of quality ELD teachers. Further, several issues that likely impact the quality of ELL teaching (e.g., inadequate resources) have not been studied.

If we agree that state policies for the development of ELD professional knowledge have been inadequate, what does the research recommend that might improve ELL teacher quality? One study suggests that policymakers can increase teacher quality in high-poverty schools by requiring schools to report teachers' credentials, including the lack of credentials for those who do not have the proper license for this subject or these students (Galston, 2000). Such a policy may have limited impact in immigrant communities, however, where parents may have few opportunities to choose a different school or teacher who could better serve their ELL child. In addition, Galston suggests that federal policymakers revisit the use of teacher aides, on the suspicion that high-poverty schools and, by extension, those with many ELLs, rely on aides for instruction in the place of a credentialed teacher. We believe such proposals, while well-intentioned, may not be necessary. The teacher shortage in high-poverty schools is rarely the result of schools choosing to hire teachers who lack the required credentials. Rather, the lack of credentialed teachers in nearly all cases is the result of (a) no new teachers with the proper qualifications applied or (b) existing teachers cannot be forced to add credentials or endorsements.

In place of mandating requirements to increase teacher quality, legislators and other policymakers have offered additional compensation for teachers who perform well or teach in high-need areas. For instance, in the Houston Independent School District (the nation's fourth largest, behind only Los Angeles in its number of ELLs), the school board just approved a new stipend for ESL (ELD) special-education teachers. Teachers with both the ESL and special education credentials will receive an additional \$2,000 annually. How such a stipend will affect teacher quality is unknown, primarily because the stipends are linked only to additional certifications and the willingness to work with special-needs students.

More common are stipends for ELD teachers in the range of \$500–\$1000. Of course, many districts offer no stipend for ELD teaching, and instead rely upon hiring only new teachers who hold the appropriate ELD license. Such a practice may indeed lower teacher quality because only the beginning teachers are invited to work with ELLs.

At the preservice level, federal efforts to improve teacher quality at low-

income schools or in high-need areas include the Perkins, Stafford, and private-loan cancellation program. These programs reward preservice teachers who commit to working in certain schools or teaching certain subjects by forgiving loans (up to approximately \$20,000) a beginning teacher may have accrued either as an undergraduate or in pursuit of a teaching license. Because states are free to determine which subjects and schools qualify, there is some variation among them. Currently in California, the following subjects and schools are included in the federal loan-forgiveness program: mathematics (Grades 7–12), life/physical sciences (Grades 7–12), foreign languages, special education, reading, low-income area schools, schools serving rural areas, state special schools, schools with a high percentage of emergency-permit teachers, and low-performing schools. ELD teaching is not included, nor is bilingual education. Of course, many schools with large ELL populations will be qualified under another category (e.g., low-income area schools), but it is somewhat of a mystery why beginning teachers working only with ELD students would not qualify. We wonder whether an expansion of the loan-forgiveness program to include schools with large ELL proportions could improve teacher quality.

At the inservice level, the role of additional compensation for ELD teachers has received even less attention. The closest compensation policies we can analyze at this time are the stipends many school districts offer to bilingual teachers. The effects of such stipends on teacher quality are largely unknown. However, from our own experience, we have found that the stipends have typically served not to increase the number or quality of bilingual teachers but rather to create a competition among school districts for any bilingual teacher. It stands to reason that districts that pay more for bilingual teachers will be able to compete more successfully for the highest quality teachers.

In practice, stipends for teaching ELD are rare. In spite of the legislative appeal of additional payment for ELD teachers, general studies of increasing salaries for teachers show that it does not always result in the intended effects. For instance, Ballou and Podgursky (1995) have shown that increasing teacher salaries can have the counterintuitive effect of decreasing teacher quality. Two perverse actions may be at work: (a) higher salaries may discourage older teachers—whose teaching effectiveness may have diminished—from retiring, and (b) higher salaries

may reduce a school system's overall resources, thus eliminating professional-development opportunities for all teachers, both beginning and experienced. Whether higher salaries have a differential effect on ELD teachers is an open question. However, the Ballou and Podgursky study analyzes data from a short-term salary increase. Long-term salary increases in any profession tend to result in more productive and higher quality workers, increasing the talent of those choosing

a career and encouraging those who do teach to spend more time and resources improving their instruction.

Another way policy-makers have intended to raise teacher quality is by raising the so-called quality of those who enter the field....raising pedagogy or subject-matter test standards holds enormous potential but may also limit the teacher pool in ways that work against the achievement of certain groups of students.

Ingersoll (1999) suggests that teacher quality, specifically teacher knowledge of the subjects they are teaching, is dramatically affected by principals. Ingersoll argues that principals have great latitude in assigning teachers to out-of-field assignments. If a school's administration cannot find a licensed math teacher, they might—and often must—use a teacher who is not licensed in the field. For instance, mathematics remains the teaching field where teachers are most likely out-of-field. Similarly, ELD remains a subject area with a teacher shortage. Could it be the same for ELD teachers? Whereas a definitive answer cannot be culled from the extant research, two recent studies have

directed our attention to school leader preparation regarding ELLs. Motivated by the fact that principal preparation programs have generally ignored ELD, Reyes (2006) initiated a leadership development model that results in principals who are more aware, and thus more effective, in managing the learning of ELLs. In addition, Suttmilller and González (2006) provide a model for preparing inservice school administrators that improves the instruction of ELLs.

Policymaking does not routinely employ the extant knowledge base in systematic ways. Hawley (1990) argues that the policies developed for preparing and maintaining quality teachers “are not burdened by their fit with available knowledge or systematically developed theory.” In a recent example, the Certificated Staff Performance Incentive Act was developed to provide cash payments to teachers at low-performing schools where test scores improved (many of these schools enrolled a large proportion of ELLs). Fraught with challenges, the payments often went to

schools whose scores were high one year and then average the next. Furthermore, teachers at the awarded schools found themselves increasingly reluctant to accept the money, pointing out that their colleagues in other schools were teaching just as well and getting no award money. In fact, the largest teacher association in the state suggested that teachers refuse to accept the money.

Another way policymakers have intended to raise teacher quality is by raising the so-called quality of those who enter the field. The inexpensive and quick way of ensuring quality by raising pedagogy or subject-matter test standards holds enormous political potential but may also limit the teacher pool in ways that work against the achievement of certain groups of students (Memory, Coleman, & Watkins, 2003).

Teacher-evaluation programs are common targets for policymakers hoping to raise teacher quality. Gallagher (2002) studied the relationship between teacher-evaluation scores and student achievement in a school with an ELL majority. Using a teacher-evaluation system based on NBPTS and standardized test scores, Gallagher found a positive and statistically significant correlation between teacher-evaluation and student scores in literacy but not in mathematics. This finding is explained by the fact that the study took place in the aftermath of Proposition 227, which eliminated native-language instruction in nearly all California schools. With the entirely new focus on English instruction, Gallagher speculates that the attention to preparing ELL students for the English standardized test pushed teachers to align their work with state content standards, thus linking teacher-evaluation with student scores. We cannot be sure how such a finding might be used to enhance teacher quality, but we share the belief that strong instructional goals and the means to achieve them strengthen teacher quality.

Policies developed to raise or reward teacher quality, though often well-intentioned, can have unintended consequences. Two common policy practices for raising teacher quality (i.e., offering rewards for improved student test scores and raising requirements for entry to the field) have shown appeal in the policymaking community, but less promise in actual practice.

Knowledge Base

Having examined the structural factors that impact ELL teacher quality, we now turn attention to the pedagogical knowledge that is necessary to provide high-quality ELD instruction. Fradd and Lee (1998) suggest that a knowledge base for ELD teachers include each of the following competencies:

- **Language Acquisition Process:** ELD teachers must have a strong understanding of language acquisition. Most importantly, they must be familiar with the concept of communicative competence (Hymes, 1967) and know how language function forms the basis for ELD instruction.
- **Subject-Area Content:** ELD teachers must be content-area experts, as well as language teachers. ELD teachers are increasingly prevailed upon to teach both language and content. ELD teachers also responsible for content instruction in English must be able to restate questions, paraphrase concepts, and summarize key ideas in English. Teachers must know how to bridge the content with English.
- **Culture and Pragmatic Language Use:** ELD teachers must understand the processes of cultural growth and cultural adaptation.
- **Curriculum and Instruction:** ELD teachers must possess a knowledge of how to adapt grade-level materials to the needs of ELLs.
- **Assessment:** Because placement and exit from ELD programs is often determined by standardized testing, ELD teachers should have a deep understanding of such assessments.
- **Technology:** Computers can assist teachers in providing simultaneous auditory, iconic, and written input for ELLs, thus enhancing language acquisition.
- **Classroom, School, and Community Contexts:** ELD teachers must often act as ELL advocates. Therefore, knowledge of the ways that schools and communities interact is crucial. ELD teachers broker the differences between ELLs' home language/culture and the demands of the school environment.

Although Fradd and Lee's list includes all the competencies needed

for a quality ELD teacher, it does not detail the specifics, nor discuss the many consequences, of requiring such knowledge. Our task is to expand on several of these competencies, considering more deeply the implications of the importance of each.

Freeman and Johnson (1998) consider the knowledge base from a slightly different perspective, suggesting that expert ELD teachers hold a deep understanding of three domains: (a) the teacher-learner, (b) the social context, and (c) the pedagogical process. These domains are certainly not unique to language-teacher education and are found similarly expressed in other theories of teacher education, but Freeman and Johnson add that language-teacher education must also attend to discipline-derived understandings from fields such as applied linguistics, as well as knowing the academic content of the subjects they teach. Johnston and Goettsch (2000) corroborated this finding in their interviews with experienced ELD teachers. These teachers' descriptions of their teaching knowledge, however, appeared to be more of a process than a "base."

However, it is not quite accurate to say that ELD teachers' work is fundamentally different than that of other teachers. The ELD teacher's focus is, of course, squarely on the teaching of language, but every teacher must teach students the specific language of their subject or discipline. For instance, secondary biology teachers must indoctrinate their students into a new language of categories and help them learn new names for plants and animals they may already know in common English. However, the role that language plays in the ELD teacher's pedagogy is more prominent than for the non-ELD teacher. The biology teacher's task is largely one of teaching noun classes. But students of biology are not required to learn a new syntax when learning scientific terms for living organisms. Biology teachers can rely on the fact that their students can use their system of English (or other native language) in the learning of biological terms.

For ELLs, this advantage is only partly available. It is, of course, true that each and every language has syntax, and that ELLs can utilize their knowledge of the native-language syntax to learn English, but whether students' knowledge of their native language helps or hinders the learning of English is an open question, widely debated in research (Ellis, 1985).

The publication of Shulman's work (Shulman, 1987, 2004) on the foundations of teaching introduced educators to a new conceptual frame for understanding the knowledge base of teaching. While the notions of content and pedagogical knowledge had been widely recognized prior to Shulman's work, the proposition that a teacher's knowledge base might also include pedagogical strategies specific to

the discipline—what Shulman called “pedagogical content knowledge”—represented a new way of conceiving what teachers ought to know. Further refinements to the concept (Grossman, 1990) made clear that excellent teachers understood that the pedagogical methods of one discipline could not be grafted on to another with similar results.

ELD teachers must possess an understanding of the structure and rules of English, as well as a broader understanding of languages and language development in general. One of the key issues for teacher quality among ELD teachers is the amount and depth of such knowledge.

The concept of pedagogical content knowledge has been particularly helpful in assisting researchers in understanding how teachers link their knowledge of mathematics and their knowledge of how to teach mathematics (Ball, 2000). What is clear from this research is that a teacher can understand a mathematical concept well, but be unclear about how to teach it. Pedagogical content knowledge seems to apply particularly to the teaching of mathematics, but the concept applies to all content areas.

Social studies, for instance, has its own specific pedagogical content knowledge.

But it is unclear how, or even whether, this concept applies to language teaching. Consider, first, the content knowledge of a language teacher. Of course, an ELD teacher must know English. The research on the teaching of English by nonnative, less proficient speakers clearly demonstrates that a teacher must have an advanced command of the target language. Failure to grasp the subtleties of a target language by the teacher results in low achievement by students. But how do teachers understand how to teach something for which they have no memory of learning? We learn our native language with seemingly no effort. With minimal input and almost no correction, drill, or practice, every normal functioning child learns the dialect of the caregivers nearby. The same, of course, cannot be said of social studies, science, or mathematics. Clearly, the pedagogical side of pedagogical content knowledge in second-language teaching offers us an interesting puzzle.

The goal, therefore, seems to be knowledge of how language is mastered while noticing the differences between native- and second-language acquisition. This concept may seem quite simple, but finding the balance as an ELD teacher can be difficult. ELD teachers know that some ELLs acquire English with little or no effort. Such students need little direct instruction and appear to absorb English as easily as children who are learning their native language. Other ELLs seem to make little headway in mastering the language. High-quality ELD teachers, at the very least, must be aware of not only the general strategies required of ELD, but also the individual differences in language teaching.

Indeed, studies of second-language learners in natural environments suggest that native speakers (i.e., teachers) with little academic training make no allowances for the learners (Terrell, 1977), speaking as though the learners already understand the language. Native speakers who have extensive academic experiences, on the other hand, tend to overcompensate, explaining rules and structure in frustrating detail and, in the end, confusing the learner altogether. These issues raise questions about how much, and what type of, linguistic knowledge is needed for high-quality ELD instruction.

Linguistic Knowledge: How Much Is Enough?

Speaking a language does not guarantee knowledge about that language. Indeed, one of the hallmarks of human languages is the ease with which we speak a language while having very little knowledge or even awareness of its fundamental rules or structure. The vast majority of people never consider the complexity of the languages they speak. Nor is there any compelling reason for them to do so. They have a functional capacity for the language or languages they speak, and any knowledge of the form of the language is largely unnecessary.

ELD teachers, on the other hand, must possess an understanding of the structure and rules of English, as well as a broader understanding of languages and language development in general. One of the key issues for teacher quality among ELD teachers is the amount and depth of such knowledge (linguistic knowledge). But such knowledge cannot be compared directly with the knowledge of a linguist. Linguists view language as an object of study. Grosse (1991) has suggested that

contemporary ELD teachers who understand language in this way (i.e., language as an object) are burdened, believing that teaching English is tantamount to teaching about the language rather than with the language. It is perhaps this misunderstanding that often results in low instructional quality by ELD teachers.

Many ELD teachers have an impulse to begin with rules and structures about the language rather than with its use and functional aspects. The tension between accuracy and fluency in language teaching remains contested. Krashen and Terrell (1983) maintain that fluency goals should dominate ELD instruction, suggesting that we learn accuracy in the language (e.g., the correct use of rules and systems) only by using the language in meaningful ways. Norris and Ortega (2002), in a comprehensive meta-analysis of second-language teaching strategies, found tentative evidence that a focus on function encourages increased achievement in the second language, on both measures of accuracy and fluency. Again, how to develop in teachers the right balance is a challenging effort.

One of the best efforts at defining this balance comes from Wong Fillmore and Snow (2000), who examine the specifics of what teachers should know about linguistics. They argue that ELD teachers do need to know more than just how to speak the language and suggest that ELD teachers be expert in the following domains of linguistic knowledge.

- Language and Linguistics: language structure, language in literacy development, language use in educational settings, the history of English, and the basics of linguistic analysis
- Language and Cultural Diversity: cultural contrasts in language use
- Sociolinguistics for Educators in a Linguistically Diverse Society: language policies and politics
- Language Development: general course in how children learn language with a focus on academic language development in school-aged children
- Second-Language Learning and Teaching: a focus on second-language learning, comparing native-language and second-language acquisition, as well as questions about oral competency and literacy

- Language of Academic Discourse: how the register of academic language contrasts with informal language use
- Text Analysis and Language Understanding in Educational Settings: how language structures and style in written text affect comprehensibility

We find it difficult to argue with the depth and breadth of the courses Wong Fillmore and Snow propose, but we wonder how a preservice teacher-education program, let alone an inservice model, could deliver on such a comprehensive model. For instance, in California, the state with the greatest number of ELLs, there is just one required credential course focused on second-language teaching. In Texas, whose ELL population is second only to California, four courses are required for ESL endorsement, a number closer to (but still falling short of) Wong Fillmore and Snow's seven. However, the ESL endorsement in Texas can be earned by passing a pencil-and-paper test of second-language teaching methodology, and the vast majority of ELD teachers in the state choose the test in place of coursework.

Given the importance of linguistic knowledge among ELD teachers, we are concerned about where such knowledge will fit within the myriad of other teaching skills needed by the ELD teacher. As we mentioned earlier, instructional growth in one task is met only by eliminating another. (It is surprising to note that some educators have boldly suggested that linguistic knowledge is important for all teachers [Reagan, 1997].) The solution is to link the important linguistic knowledge to issues relevant to the teaching context. In the next section, we suggest a possible method for achieving this goal.

A Proposal for Linking Linguistic Knowledge to ELD Teaching

One of the most pressing questions about the knowledge base in language education regards the role of a student's native language in learning a new one. Nativists and cognitivists have developed new ideas about this relationship, most of which run counter to the behaviorist's viewpoint that errors in the second language were owing to interference from the native. Understanding this view of language learning is important for ELD teachers, but Noam Chomsky's theory (1968) on the nativist view of language acquisition, known as "universal grammar," has important

but limited applications in the ELD classroom. Teachers should understand that one commonly used test of universal grammar can be useful, especially as it relates to native-Spanish speakers learning English. What follows is an example of a method for improving the knowledge base, and therefore the quality, of ELD teachers.

In his early works, Chomsky (1968) argued that we are equipped at birth with the capacity to learn any human language. After suggesting this view, Chomsky and his colleagues began to work out the details of how such a theory could be used to explain how we learn one specific human language, a feat common to almost all children. One of the subtheories Chomsky and his colleagues developed is known as “principles and parameters syntax,” which suggests that all human languages bear some similar underlying structure.

One of the important parameters used to study the differences between the syntax of languages is the pronoun-drop (or pro-drop) parameter. A discussion of this parameter is especially useful for teachers who will work with emerging bilingual students because English and Spanish (and most romance languages for that matter) differ with regard to this syntax rule. While many studies in the field of linguistics have focused on this parameter, the description I draw upon here is taken from Cook’s (1993) text.

In English, declarative sentences require a pronoun. But in Spanish, sentences that drop the pronoun are clearly understood. For instance, one can say “habla” (“speaks”) and the meaning is clear without providing the pronoun reference. In this case, the context of earlier sentences in the conversation or text provides the information about who is doing the speaking. If the subject of the sentence is not clear, then the pronoun can be added without breaking any rules of the language. But the typical use of Spanish, regardless of dialect, requires no use of a pronoun in this instance.

Teachers, even in their earliest ELL field placements, can listen to the students and notice when they are transferring the patterns of Spanish to the learning of English. In the case of the pro-drop parameter, native-Spanish-speaking students will drop the pronoun even though this parameter is set differently in English. Indeed, studies have shown that nearly all native-Spanish-speaking children use the pro-drop parameter of Spanish at some stage of English acquisition (Pease-Alvarez, 1993).

Monolingual English teachers, in particular, can be made aware that this “error” in learning to speak English is, in fact, native-Spanish-speaking students using their prior knowledge to produce their new language. An understanding of pro-drop can reduce the shameful number of monolingual English teachers who interpret various set parameters from a native language as lazy or sloppy English use by ELLs. Thinking of this resetting of parameters as simply incorrect usage, and therefore requiring an immediate correction, teachers inhibit language fluency. Of course, all English teachers want their students to produce English that resembles the competence of a native speaker, but the research on parameter resetting has shown that, in typical situations, teachers must simply provide opportunities to hear the correct usage, repeating or rephrasing the language of the student using the correct form.

Successful language teachers understand that effective second-language learning must be built upon the native language. Teachers must recognize constructions from the native language and understand how they relate to the teaching of English.

This brief but working concept of principles and parameters within universal grammar can also be useful in disabusing monolingual English teachers of the notion that learning English is a matter of reducing interference. Very often, monolingual teachers believe that speaking less Spanish will encourage more English acquisition. In fact, successful language teachers understand that effective second-language learning must be built upon the native language. Teachers must recognize constructions from the native language and understand how they relate to the teaching of English.

The pro-drop parameter can help teachers understand an important difference between English and Spanish and provide an introduction to Chomsky’s theory of language. But understanding this parameter also can be easily related to the practice of teaching English. Teachers who have an opportunity to work directly with ELL students, especially those at the beginning English stages, can quickly recognize an applied dimension of linguistic theory. So rather than insist that teachers who will work with ELL students be taken on a long and unproductive journey into linguistics research, a deep focus on the pro-drop parameter can join generalizations and practices in the field of linguistics in ways that we believe makes sense to practicing teachers.

Languages

How many languages should a person know? The answer is, of course, as many as possible. And although there appears to be no cognitive limits to the number of languages a person can learn, the opportunity to master additional languages is constrained by time and motivation. But do those who have mastered several languages make better ELD teachers?

This question, to our knowledge, has not been explored in the teacher-quality literature. Indeed, current research does not even answer how many ELD teachers speak multiple languages. But it is clear that knowing a language other than English, especially if that language is the native language of students, has the potential to create higher quality instruction.

Considering the role that knowledge of multiple languages would play in implementing quality ELD instruction, at one extreme, we might imagine teachers who speak the students' native language engaging in inter-topic concurrent translation (i.e., the teacher states an idea in the target language and follows it with a translation in the students' native language). While this practice may appeal to educators with limited understanding of second-language learning, the research has shown that it discourages the learning of a target language (Krashen, 1982). Research in second-language learning has demonstrated that presenting students with comprehensible input in the target language, while severely limiting the use of the students' native language, is the most efficient method. In this example, we may conclude that knowing multiple languages, including home language of the students, serves to decrease the quality of ELD teachers.

On the other hand, teachers who speak multiple languages and have a well-developed knowledge of second-language strategies would avoid concurrent translation. Their knowledge of multiple languages may allow them to help students bridge knowledge of their native language, and use the students' native language to buttress their learning of English.

Learning another language may encourage a healthy empathy among multilingual ELD teachers. Such teachers may be able to relate better to the challenges faced by their students. Recent research (Minaya-Rowe, 2006)

investigated this very topic and found that native English speaking preservice teachers who were required to take their ELD methods courses in Spanish became more sensitive to the needs of ELLs and better able to design instruction. Alternatively, multilingual teachers might assume that their students' experiences of learning a second language are similar to their own. The danger of this kind of generalization is that teachers "teach the way they were taught," weighing their students' experiences and achievements against their own, irrespective of the social, cultural, and economic distance between the two.

However, without a comprehensive research base for drawing conclusions, our efforts here are speculative. And in practice, it may be impossible to ask ELD teachers to know the native languages of all their students, especially in contexts where a teacher may have several native languages represented in the class.

Teacher Verbal Ability and Its Potential Relationship to Quality ELD Instruction

Teacher verbal ability (as measured by SAT verbal scores, for instance) is routinely associated with increased student achievement (Verstegen & King, 1998). To our knowledge, no current research has associated ELD teacher effectiveness with verbal ability. However, we might assume that, for ELD teachers who are responsible for teaching language, verbal capacity and flexibility might prove to be related to student achievement.

The measurement of verbal ability is, of course, a very controversial topic in psychometric research. Like all measures of ability, verbal ability is designed to assess how well a person can respond to novel uses of language in a testing condition. The test evidence is thought to then indicate the capacity for understanding and using verbal agility in other contexts. Our speculation is that ELD teachers who easily see patterns and relationships among words and sentences, as well as the coherence of text as a whole, may be able to understand the ways that ELLs are using or misusing English. Differences in verbal capacity and flexibility could mean that one teacher could find patterns in the ways ELLs are using English, and correct or endorse those patterns, while another teacher would be left wondering why the students continued to make the same errors repeatedly. Interestingly, secondary students seem to be able to recognize verbal ability and identify it with effective teaching (Brosh, 1996).

The attention paid to the relationship between verbal ability and quality teaching warrants further consideration. This is especially true when it is believed that teacher quality is not a consequence of training but rather a matter of intellectual capacity and life experiences.

Pedagogical Strategies

The discipline of second-language teaching has produced a long and rich history of methods for teaching language. While some once-common methods of language teaching have now been determined to be ineffective, the discipline has traditionally been receptive to the use of experimental research to uncover the most effective methods for language teaching in specific contexts for specific students.

In a recent review of effective instructional practices for ELLs, Waxman and Téllez (2002) found the following seven instructional practices associated with high academic achievement among ELLs.

- Collaborative learning/community-building teaching practices
- Multiple representations designed for understanding target language
- Building on prior knowledge
- Instructional conversation/protracted-language events
- Culturally responsive instruction
- Cognitively guided instruction
- Technology-enriched instruction

We refer readers to this report (2002) for a discussion of these practices, as well as suggestions about how teachers can implement them. Unlike some researchers (e.g., Lakdawalla, 2001), we believe that innovations in pedagogy, based on sound research, can greatly improve the quality of ELD teaching.

The essence of our findings in the earlier report suggests that effective ELL teachers distinguish themselves by their capacity to link academic and conceptual ideas with the everyday reasoning skills students already possess (Duran, Dugan,

& Weffer, 1997). Accomplishing such a task, however, requires teachers to pay close attention to the culture of the students. Further, quality ELD teachers must understand how the home culture of the students interacts with the instruction of English.

Cultural Knowledge

Teaching ELLs almost always implies teaching immigrant children or the children of immigrants. For this reason, ELD teachers must have specialized knowledge of how a student's home culture interacts with the formal school curriculum. So it comes as no surprise to find that each of the professional organizations has developed goals related to teacher knowledge of student culture. But as with the other categories we have discussed, the question is not whether such knowledge is important, but rather how much knowledge is needed to provide quality instruction. In addition, we must also address the best methods for developing such knowledge in practicing ELD teachers.

Like ELLs' native languages, the culture of ELLs can vary widely, and in some instances, it may be impossible for ELD teachers to have a complete and coherent knowledge of all the cultures represented by their students. For example, in one year, an ELD teacher might find an Armenian student in the class, while the next year a Hmong student may enroll in her place.

We recognize that ELD teachers should know the culture of the ELLs in their class deeply enough to develop curriculum relevant to students' life experiences, but we are also aware of the extraordinary challenge that such a mandate implies.

In response to the challenge of creating culturally relevant teaching, teacher educators, policymakers, and school-district administrators have created two different, though not exclusive, paths to quality cultural instruction for ELLs.

The two fundamental strategies thought to create culturally consistent teaching are (a) recruit teachers who represent the culture of the ELLs, or (b) recruit well-prepared and motivated teachers, irrespective of their home culture, and provide professional-development opportunities so that they can learn the culture of the students and link it to schooling activities (Téllez, 1999).

The first strategy is primarily a recruitment effort designed to improve teacher quality (Reinhardt, 2001). One of the more recent challenges in the study of culture in schools—and one that appears to be long-lasting—is the relationship between the culture of the teacher and the culture of the students (García & Guerra, 2004). For many years, this relationship was of little concern to anyone. It was simply assumed that teachers, as representatives of the dominant culture, would impart their cultural values and beliefs to the students, irrespective of how those beliefs may conflict with those of the students. But more recently, we have, with good reason, come to question our earlier neglect of this relationship, asking perhaps if the cultural mismatch between the teacher and the students could prevent ELLs from achieving to their capabilities.

Teachers who are representatives of the culture of the students have a distinct advantage when creating instruction based on their shared culture. Such an advantage doubles when the teacher and students share a common language. Recruitment may appear to be a simple, straightforward strategy for matching culture to instruction, but several research studies have demonstrated that many university students who represent the language and cultural background of ELLs often choose other professions (Gordon, 1994; Heninger, 1989). Further, researchers have raised questions about just how obvious it is for teachers of a certain ethnicity to develop curriculum based on their own culture when the school is promoting a different set of ideas (Téllez, 1999), implying that, irrespective of the culture of teachers, they still require new pedagogical understandings to create culturally unified instruction. In addition to the challenges described above, we find that in the case of many ELLs, their cultural groups are not represented well among those preparing to teach, and a challenging puzzle emerges. For instance, data reveal that as the number of Mexican-American students is increasing, the number of Mexican-American teachers is decreasing, both proportionate to the student population and in number (Lewis, 1996). With fewer Mexican-American teachers to connect home culture to schooling for Mexican-American ELLs, fewer ELLs will be successful in school and they will be less likely to attend postsecondary educational institutions, required for a career as a teacher. Thus, the cycle produces fewer Mexican-American teachers.

The second strategy for linking culture to language teaching for ELLs is

to prepare teachers of any ethnicity to provide a quality, culturally consistent education for ELLs. In a seminal paper, Au and Jordan (1981) found that teachers were able to negotiate a more appropriate reading instructional strategy for elementary-school, native-Hawaiian children. Specifically, they found that atomized reading instruction (e.g., phonics practice, word lists) was not interpreted by native-Hawaiian children as an instructional moment. In Hawaiian homes, linguistic events such as storytelling served as social markers to alert children that an adult was going to teach something and the children's attention was needed. When reading lessons began as phonics instruction, the children thought that their attention was unnecessary, as if the teacher was doing something for herself. In revising the curriculum and encouraging the native-Hawaiian teachers to use more culturally relevant instruction, Au and Jordan found that when reading instruction began with a story common to the children's experience, reading scores on a standardized test improved. This type of cultural knowledge is most easily understood by teachers who share an ethnic tradition with the students. But could teachers who do not share the culture of the students develop the skills needed to implement strategies that resonate with ELLs' home culture?

In addition to pedagogical strategies, researchers have found that social and behavioral patterns such as "turn-taking" can vary widely among different ELLs (McCollum, 1989) with dramatic consequences for the ELD teacher who fails to understand such cultural patterns.

This discussion can be characterized as a simple dualism. Do we enhance teacher quality by promoting what teachers know about the culture of their students? Or should we insist that teachers be of the community? Like all dualisms, this one falsely separates concepts that are not mutually exclusive. We believe the answer for promoting high-quality ELD is the promotion of both for all teachers. Teachers who represent the language and culture of the students should be encouraged to learn more about their students. For instance, a teacher and her students may share the Vietnamese culture, but a substantial cultural distance can grow between a second-generation U.S. immigrant and those who have recently arrived. In addition, teachers who come from a different cultural tradition can and should learn about their students, but they also can come to see themselves as part of the community, as active members of a culture while not necessarily sharing ethnicity.

While we strongly agree with those who endorse the idea that quality ELL teachers use home culture as a curricular source, we also recognize that many parents of ELLs want their children to learn the ways and customs of life in the U.S. (Blum, Koskinen, & Tennant, 1995). Of course, no one is suggesting a return to the time when immigrant students were immersed and indoctrinated in the

Knowing and acting on the balance between validating a student's native culture in formal schooling while assisting them in learning the subtleties and nuances of another is the apotheosis of teaching immigrant students.

view that U.S. political, economic, and cultural values were superior in the world, but a quality ELD teacher will recognize what Dewey (1976) pointed out in 1938, over 70 years ago: Ethnic identity must be balanced in a pluralistic society. And although he was clearly opposed to the conservatives of his day who wanted all immigrant groups to remove their ethnic affiliations, he recognized that the plurality of the U.S. was an important democratic element. Dewey noted that “bad” hyphens separate; “good” hyphens attach. As Ryan (1995) points out, Dewey believed that “what stood to the right of the hyphen must have its due.” Knowing and acting on the balance between validating a student's native culture in formal schooling while assisting them in learning the subtleties and nuances of another is the apotheosis of teaching immigrant students.

The use of home culture in the education of ELLs is perhaps the most complicated and controversial topic faced by ELD teachers. The ability of the nation's schools to wed immigrant children to norms and values of U.S. culture is part of the American identity. Educators must recognize that ELD teachers have the initial responsibility for this daunting task. They must further understand that ELD teachers, both at the preservice and inservice level, need extra time and resources to manage this work.

We can no longer believe that ELD teaching is merely language instruction. Teachers must understand how culture and language interact in the development of youth as active participants in a democracy, as well as in the learning of English.

Summary and Concluding Thoughts

Issues of teacher quality have been of great concern for many years, but examination of teacher quality for specific subjects or disciplines such as ELD is quite new. We hope that this report encourages researchers and policymakers to examine quality teaching not as a global outcome but as a construct responsive to different kinds of teachers, including the recognition of the developmental nature of a teaching career (e.g., preservice or inservice), the students they will serve (e.g., cultural diversity) as well as the subjects they will teach. We believe that creating a pool of quality ELD teachers will require attention to issues specific to second-language instruction. Clearly, ELL students remain in need of higher quality instruction (Rumberger & Gándara, 2000).

In spite of state mandates and recent reforms promoting teacher quality, many teachers remain unsure about their capacity to teach ELLs. The wholesale improvement of teacher education in the interests of ELL students is the goal, but the issues are diverse and often complicated. We must keep in mind the complexity of raising teacher quality and not be tempted by simple functionalist views of teaching and learning. We agree with Jere Brophy (1987), one of the leaders in quality teacher research, who cautions against the misuse of such a view, arguing against rigid guidelines such as “Behavior X correlates with student achievement gain, so teachers should always do Behavior X.” A straightforward recommendation derived from the production/function research literature, while alluring to those looking for quick ways to improve student learning, fails to capture the varied contexts of a specific instructional context (Brophy, 1987). We argue that ELD is clearly such a specific context.

But the desire for a quick fix is compelling. The achievement gap between native-English-speaking children and ELLs must be addressed. Capability in English is becoming a worldwide necessity for professional employment. And while the U.S. has always been tolerant of those who speak multiple languages, one of those languages must be English. In spite of the importance of English, we share Edwards’ (1994) view that the goal of language education is the multi-glossic culture, in which most members use two or more languages for varying purposes. High-quality ELD teachers can balance the need for English with a

respect and encouragement for students' native languages (Valdés, Bunch, Snow, & Lee, 2005). But again, ELLs must learn to speak, read, and write English quickly and accurately. While language educators may disagree about the role of students' native languages in ELD, each of us recognizes that, with a strong command of English, our children and youth can all become full participants in U.S. economic, political, and cultural life. High-quality ELD teachers represent our best hope for achieving this goal.

References

- Abell Foundation. (2001). *Teacher certification reconsidered: Stumbling for quality*. Baltimore, MD: Author.
- Ada, A. F. (1986). Creative education for bilingual teachers. *Harvard Educational Review*, 56, 386–394.
- Alexander, D., Heaviside, S., & Farris, E. (1999). *Status of education reform in public elementary and secondary schools: Teachers' perspectives*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- American Association for Colleges of Teacher Education. (2003). *Preparing teachers for second-language learners*. Retrieved December 17, 2003, from http://www.aacte.org/Multicultural/bilingual_resolution.htm
- Ashton, P., & Webb, R. (1986). *Making a difference: Teachers' sense of efficacy*. New York: Longman.
- Au, K., & Jordan, C. (1981). Teaching reading to Hawaiian children: Finding a culturally appropriate solution. In H. Trueba, G. Guthrie, & K. Au (Eds.), *Culture and the bilingual classroom: Studies in classroom ethnography* (pp. 139–153). Rowley, MA: Newbury House.
- Ball, D. L. (2000). Bridging practices: Intertwining content and pedagogy in teaching and learning to teach. *Journal of Teacher Education*, 51(3), 241–247.
- Ballou, D., & Podgursky, M. (1995). Recruiting smarter teachers. *Journal of Human Resources*, 30(2), 326–338.
- Blum, I. H., Koskinen, P. S., & Tennant, N. (1995). Using audiotaped books to extend classroom literacy instruction into the homes of second-language learners. *Journal of Reading Behavior*, 27, 535–563.
- Britzman, D. (1991). *Practice makes practice: A critical study of learning to teach*. Albany, NY: State University of New York.
- Brophy, J. (1987). *Research on teacher effects: Uses and abuses*. East Lansing, MI: Institute for Research on Teaching.
- Brosh, H. (1996). Perceived characteristics of an effective language teacher. *Foreign Language Annals*, 29(2), 125–138.
- Chomsky, N. (1968). *Language and the mind*. New York: Hartcourt.
- Cochran-Smith, M., & Fries, M. K. (2001). Sticks, stones, and ideology: The discourse of reform in teacher education. *Educational Researcher*, 30(8), 3–15.
- Cook, V. (1993). *Linguistics and language learning. Modern linguistics*. New York: St. Martin's Press.
- Darling-Hammond, L., & Bartz-Snowden, J. (Eds.). (2005). *A good teacher in every classroom: Preparing the highly qualified teachers our children deserve*. San Francisco: Jossey-bass.

- Darling-Hammond, L., & Bransford, J. (Eds.). (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco: Jossey-Bass.
- Darling-Hammond, L., & McLaughlin, M. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*, 76(8), 597–604.
- Darling-Hammond, L., & Youngs, P. (2002). Defining highly qualified teachers: What does scientifically-based research actually tell us? *Educational Researcher*, 31(9), 13–25.
- Dewey, J. (1976). Nationalizing education. In J. Boydston (Ed.), *John Dewey: The middle works, 1899–1924, Vol. 10* (pp. 202–210). Carbondale, IL: Southern Illinois University Press.
- Duran, B. J., Dugan, T., & Weffer, R. E. (1997). Increasing teacher effectiveness with language minority students. *High School Journal*, 80(4), 238–246.
- Edwards, J. (1994). *Multilingualism*. London: Routledge.
- Ellis, R. (1985). *Understanding second-language acquisition*. Oxford: Oxford University Press.
- Fradd, S. H., & Lee, O. (1998). Development of a knowledge base for ESOL teacher education. *Teaching and Teacher Education*, 14(7), 761–773.
- Freeman, D., & Johnson, K. E. (1998). Research and practice in English language teacher education. *TESOL Quarterly*, 32(3), 397–622.
- Gallagher, H. A. (2002). *The relationship between measures of teacher quality and student achievement: The case of Vaughn Elementary*. Unpublished dissertation, University of Wisconsin-Madison.
- Galston, W. A. (2000). *Federal policies to improve teacher quality for low-income students*. Unpublished doctoral dissertation, University of Maryland.
- Gándara, P., Maxwell-Jolly, J., & Driscoll, A. (2005). *Listening to teachers of English language learners: A survey of California teachers' challenges, experiences, and professional development needs*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.
- García, E. (1990). Educating teachers for language minority students. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 717–729). New York: Macmillan.
- García, S. B., & Guerra, P. L. (2004). Deconstructing deficit thinking: Working with educators to create more equitable learning environments. *Education and Urban Society*, 36, 150–168.
- Goldhaber, D., & Brewer, D. J. (2000). Does teacher certification matter? High school teacher certification status and student achievement. *Educational Evaluation and Policy Analysis*, 22(2), 129–145.
- Gordon, J. A. (1994). Why students of color are not entering teaching: Reflections from minority teachers. *Journal of Teacher Education*, 45(5), 346–353.

- Grosse, C. U. (1991). The TESOL methods course. *TESOL Quarterly*, 25, 29–49.
- Grossman, P. L. (1990). *The making of a teacher: Teacher knowledge and teacher education*. New York: Teachers College.
- Hargreaves, A., & Fullan, M. (1998). *What's worth fighting for out there*. New York: Teachers College.
- Hawley, W. D. (1990). Systematic analysis, public policy-making, and teacher education. In W. R. Houston (Ed.), *Handbook of research in teacher education* (pp. 136–156). New York: Macmillan.
- Heninger, M. L. (1989). Recruiting minority teachers: Issues and options. *Journal of Teacher Education*, 40(6), 35–39.
- Hopkins, D., & Stern, D. (1996). Quality teachers, quality schools: International perspectives and policy implications. *Teacher and Teacher Education*, 12(5), 501–517.
- Hymes, D. (1967). The ethnography of speaking. In T. Gladwin and W. C. Sturtevant (Eds.), *Anthropology and human behavior*. Washington, DC: Anthropological Society.
- Ingersoll, R. M. (1999). The problem of underqualified teachers in American secondary schools. *Educational Researcher*, 28(2), 26–37.
- International Reading Association. (1998). *Standards for reading professionals*. Retrieved December 17, 2003, from http://www.reading.org/advocacy/standards/free_index.html
- Jackson, A. W., & Davis, G. A. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York: Teachers College.
- Jimenez, R. T., & Barrera, R. (2000). How will bilingual/ESL programs in literacy change in the next millennium? *Reading Research Quarterly*, 35, 522–523.
- Johnston, B., & Goettsch, K. (2000). In search of the knowledge base of language teaching: Explanations by experienced teachers. *Canadian Modern Language Review*, 56(3), 437–468.
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. New York: Pergamon.
- Krashen, S. D., & Terrell, T. D. (1983). *The natural approach: Language acquisition in the classroom*. New York: Pergamon.
- Lakdawalla, D. (2001). *The declining quality of teachers*. Cambridge, MA: National Bureau of Economic Research.
- Leighton, M. S., Hightower, A. M., & Wrigley, P. (1995). *Model strategies in bilingual education: Professional development*. Washington, DC: Office of Bilingual Education and Minority Language Affairs.
- Lewis, L., Parsad, B., Carey, N., Bartfai, N., Farris, E., & Smerdon, B. (1999). *Teacher quality: A report on the preparation and qualifications of public school teachers*. Washington, DC: U. S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

- Lewis, M. (1996). *Supply and demand of teachers of color*. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.
- McCollum, P. (1989). Turn-allocation in lessons with North American and Puerto Rican students: A comparative study. *Anthropology and Education Quarterly*, 20, 133–156.
- McKnight, A., & Antunez, B. (1999). *State survey of legislative requirements for educating limited English proficient students*. Washington, DC: National Clearinghouse for Bilingual Education.
- McLesky, J., & Waldron, N. L. (2002). Professional development and inclusive schools: Reflections on effective practice. *Teacher Educator*, 37(3), 159–172.
- Memory, D. M., Coleman, C. L., & Watkins, S. D. (2003). Possible tradeoffs in raising basic skills cutoff scores for teacher licensure: A study with implications for participation of African Americans in teaching. *Journal of Teacher Education*, 54(3), 217–227.
- Menken, K., & Antunez, B. (2001). *An overview of the preparation and certification of teachers working with limited English proficient (LEP) students*. Washington, DC: National Clearinghouse for Bilingual Education.
- Milk, R., Mercado, C., & Sapiens, A. (1992). *Re-thinking the education of teachers of language minority children: Developing reflective teachers for changing schools*. Washington, DC: National Clearinghouse for Bilingual Education.
- Minaya-Rowe, L. (2006). Training teachers through their students' first language. In K. Téllez & H. C. Waxman (Eds.), *Preparing quality educators for English language learners* (pp. 23-44). Mahwah, NJ: Lawrence Erlbaum.
- National Center for Education Statistics. (1998). *Mini-digest of education statistics 1997*. Washington, DC: U.S. Department of Education.
- Newman, M., & Hanauer, D. (2005). The NCATE/TESOL teacher education standards: A critical review. *TESOL Quarterly*, 39(4), 753-764.
- Norris, J. M., & Ortega, L. (2002). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning*, 50(3), 417–528.
- Pease-Alvarez, L. (1993). *Moving in and out of bilingualism: Investigating native language maintenance and shift in Mexican-descent children*. Santa Cruz, CA: National Clearinghouse for Bilingual Education.
- Penner, J. (1999). *Teacher and principal perceptions of factors influencing teachers' decisions to participate in professional development*. Unpublished doctoral dissertation, University of Houston.
- Quisenberry, N. L., & McIntyre, D. J. (1999). *Educators healing racism*. Reston, VA: Association of Teacher Educators.
- Reagan, T. (1997). The case for applied linguistics in teacher education. *Journal*

- of Teacher Education*, 48(3), 185–196.
- Reinhardt, R. (2001). *Toward a comprehensive approach to teacher quality*. Aurora, CO: Mid-Continent Educational Research for Education and Learning.
- Reyes, A. (2006). Reculturing principals and leaders for cultural and linguistic diversity. In K. Téllez & H. C. Waxman (Eds.), *Preparing quality educators for English language learners* (pp. 145-165). Mahweh, NJ: Lawrence Erlbaum.
- Rumberger, R. W., & Gándara, P. (2000). The schooling of English learners. In E. Burr, G. C. Hayward, B. Fuller, & M. Kirst (Eds.), *Crucial issues in California education 2000*. Berkeley, CA: Policy Analysis for California Education.
- Rumberger, R. W., & Gándara, P. (2005). Seeking equity in the education of California's English learners. *Teachers College Record*, 106, 2032–2056.
- Ryan, A. (1995). *John Dewey and the high tide of American liberalism*. New York: W. W. Norton.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22.
- Shulman, L. S. (2004). *The wisdom of practice: Essays on teaching, learning, and learning to teach*. San Francisco: Jossey-Bass.
- Smith, G. P. (1998). *Common sense about uncommon knowledge: The knowledge bases for diversity*. Washington, DC: American Association for Colleges of Teacher Education.
- Suttmiller, E. F., & González, M. L. (2006). Successful school leadership for English language learners. In K. Téllez & H. C. Waxman (Eds.), *Preparing quality educators for English language learners* (pp. 167-188). Mahweh, NJ: Lawrence Erlbaum.
- Teachers of English to Speakers of Other Languages. (2003). *Standards for the accreditation of initial programs in P–12 ESL teacher education*. Alexandria, VA: Author.
- Tedick, D. J., & Walker, C. L. (1994). Second language teacher education: The problems that plague us. *Modern Language Journal*, 78, 300–311.
- Téllez, K. (1999). Mexican-American preservice teachers and the intransigency of the elementary school curriculum. *Teaching and Teacher Education*, 15(5), 555–570.
- Téllez, K., & Waxman, H. C. (2006). Preparing quality teachers for English language learners: An overview of the critical issues. In K. Téllez & H. C. Waxman (Eds.), *Preparing quality educators for English language learners* (pp. 1-22). Mahweh, NJ: Lawrence Erlbaum.
- Terrell, T. D. (1977). Natural approach to 2nd language learning-acquisition and learning. *Modern Language Journal*, 61(7), 325–337.
- Tom, A. (1997). *Redesigning teacher education*. Albany, NY: SUNY.

- Urban, W. J. (1990). Historical studies of teacher education. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 59–71). New York: Macmillan.
- Valdés, G., Bunch, G., Snow, C., & Lee, C. (2005). Enhancing the development of students' language(s). In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 126-168). San Francisco: Jossey-Bass.
- Verstegen, D. A., & King, R. A. (1998). The relationship between school spending and student achievement: A review and analysis of 35 years of production function research. *Journal of Education Finance*, 24(2), 243–262.
- Waxman, H. C., & Padrón, Y. N. (2002). Research-based teaching practices that improve the education of English language learners. In L. Minaya-Rowe (Ed.), *Teacher training and effective pedagogy in the context of student diversity* (pp. 3-38). Greenwich, CT: Information Age Publishing.
- Waxman, H., & Téllez, K. (2002). *Research synthesis on effective teaching practices for English language learners*. Philadelphia: Laboratory for Student Success, Temple University.
- Wong Fillmore, L., & Snow, C. E. (2000). *What teachers need to know about language*. Washington, DC: ERIC Clearinghouse on Languages and Linguistics.



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